eyeheight

AM-2E

dual AES voice-over

user manual

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I System Overview

The AM-2E is an audio mixer, which will mix together one embedded audio source with two AES sources. The main use for the AM-2E is for Voice over insertion into an embedded audio stream The main features are as follows:

- Mixes embedded audio with two external AES Inputs.
- Output on embedded audio and AES audio.
- Input Channel manipulation (Stereo, Mono etc…)
- Programmable auto voice over transitions GPI or panel activated
- Optional manual or motorised fader operation.
- Transparent to all other embedded signals.
- Automation controllable
- EDH re-insertion
- 6 user memories

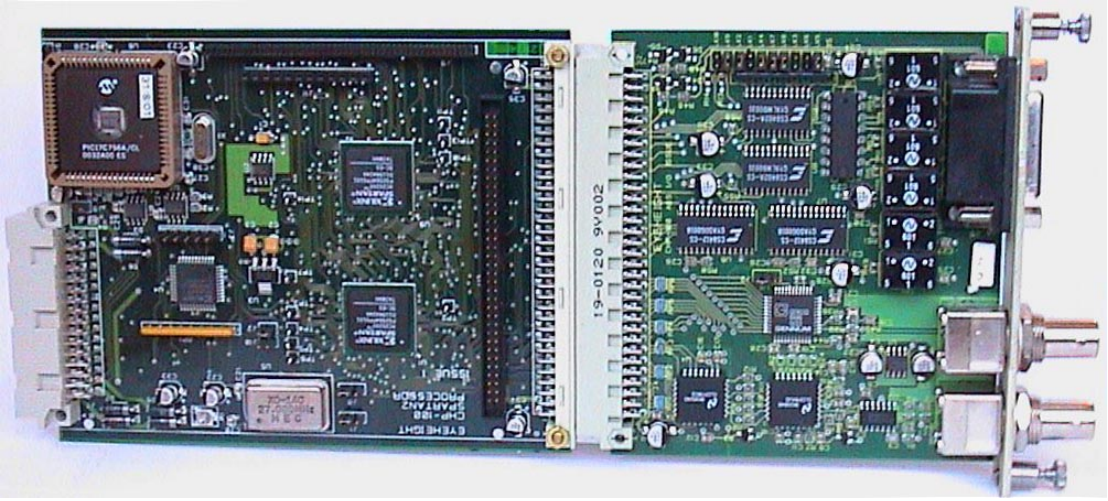

Figure 1 The AM-2E audio module

I.I Applications for the AM-2E

Applications for the AM-2E include the following:

- General voice over mixing.
- AES mixing into other Embedded audio streams. (music/emergency audio loop)
- Adding audio FX to Embedded audio streams.

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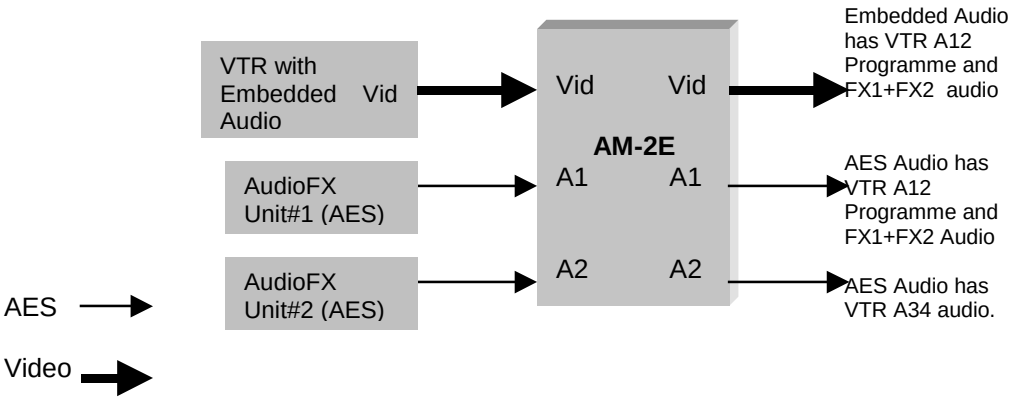

Figure 2 Typical AM-2E application

1.2 Associated Equipment for the AM-2E

The AM-2E is a module and requires both a chassis and a control surface to function.

1.2.1 Chassis Types

- **flexiBox** is a 1RU chassis. The order code is FB-9. This will hold a maximum of 3 AM-2E Modules with “Hot Swap” redundant PSU option and “Hot Swap” AM-2E modules.
- **maxiBox** is an alternative low cost 1RU chassis. The order code is MX-9. This also will hold a maximum of 3 AM-2E modules but it has no redundant PSU option and the AM-2E units must be factory fitted.

Figure 3 FlexiBox with flexiPanel fitted

1.2.2 Control Surfaces

- **flexiPanel** is a IRU control surface that fits on the Front of a 1RU flexiBox. The order code is FP-9. A FlexiPanel can also be used in conjunction with a miniBox, in this case the extra accessory (Order code RR-9) will be required
- **FP-10** is a desk mounting control surface (Order code FP-10). This unit is a modular unit which can be used in conjunction with the units below.

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Figure 4 Desktop modular panel FP-10

Figure 5 Desktop modular faders AP-10

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2 Installation

2.1 Installation of the AM-2E product

If this unit is already pre-installed in a flexiBox (FB-9), or a maxiBox, with either a local or a remote panel from the factory then refer to the "Hardware Installation Guide" which will be enclosed with the system. If this unit is pre-installed in a miniBox (MB-9), then also refer to the "Hardware Installation Guide" which will be enclosed with the system

If this unit has been ordered separately, we assume here that you already have a flexiBox system with a Flexipanel and that the flexiBox has at least one spare slot.

2.2 Installing the AM-2E into a flexiBox

To install the AM-2E into a flexiBox it is desirable (but not necessary) to power down the flexiBox. Follow these instructions.

On the rear of the flexiBox are 6 slots for Products. Remove any blanking plate. There are 2 off M2.5 Screws, which require unfastening.

Slide the Product PCB into the spare slot and firmly push it "home".

Use the two thumbscrews to fasten the unit in place.

Now refer to the "GeNETics User Guide". If your system consists of a single flexiBox with a single flexiPanel then refer to the section titled "flexiPanel Auto Set-up". If your system is part of a network with more than one flexiPanel then refer to the section titled "flexiPanel Manual Set-up". This will guide you through acquiring your product as a device on the flexiPanel.

2.3 Connecting Video to an AM-2E

A Typical Connection diagram for the AM-2E is shown below. All signals are SDI:

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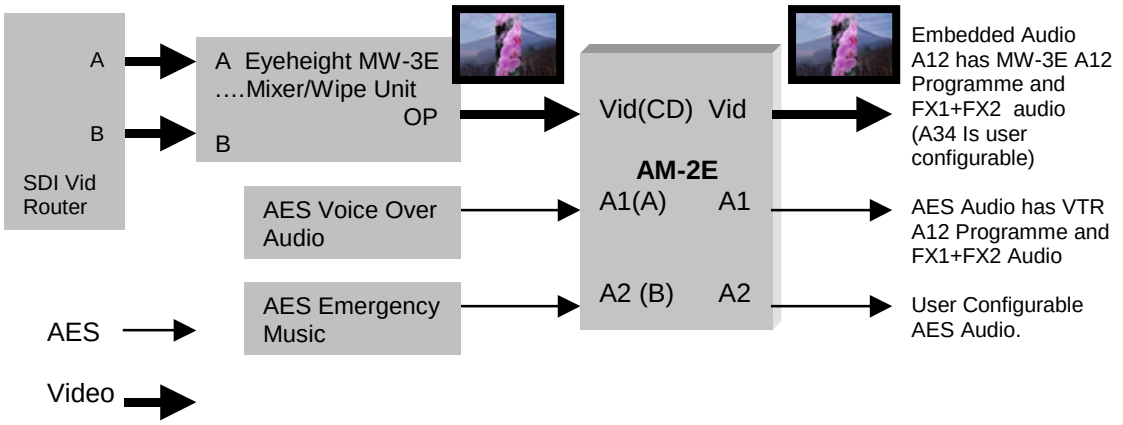

Figure 6 Typical connections for a AM-2E Module

In the above diagram the AM-2E takes its input from an Eyeheight MW-3E giving Video A/B Mix/Wipe effects with embedded audio mixing of programme. The AM-2E is then used to add in Voice over and optionally Music. This is a small presTX configuration for presentation and master control. The programme Audio34 is user configurable and can follow A12 (Such that a programme audio fade on A12 will also cause a programme audio fade on A34-[Ganged]) it can be left unchanged (Required for Audio Description) or it can be used as a Pre Fader Listen for the Voice over channels.

The connections on an AM-2E are shown below, video in and out are shown and the table gives the pin numbers on the 15W D type.

Pin Number	Function
1	AES 1 Input+
2	AES 1 Input-
3	AES 2 Input+
4	AES 2 Input-
5	AES 1 Output A+
6	AES 1 Output A-
7	AES 2 Output A+
8	AES 2 Output A-
9	AES 1 Output B+
10	AES 1 Output B-
11	AES 2 Output B+
12	AES 2 Output B-
13	GPI1 VO1 Activate
14	GPI2 VO2 Activate
15	GND

Figure 7 Connections for the AM-2E

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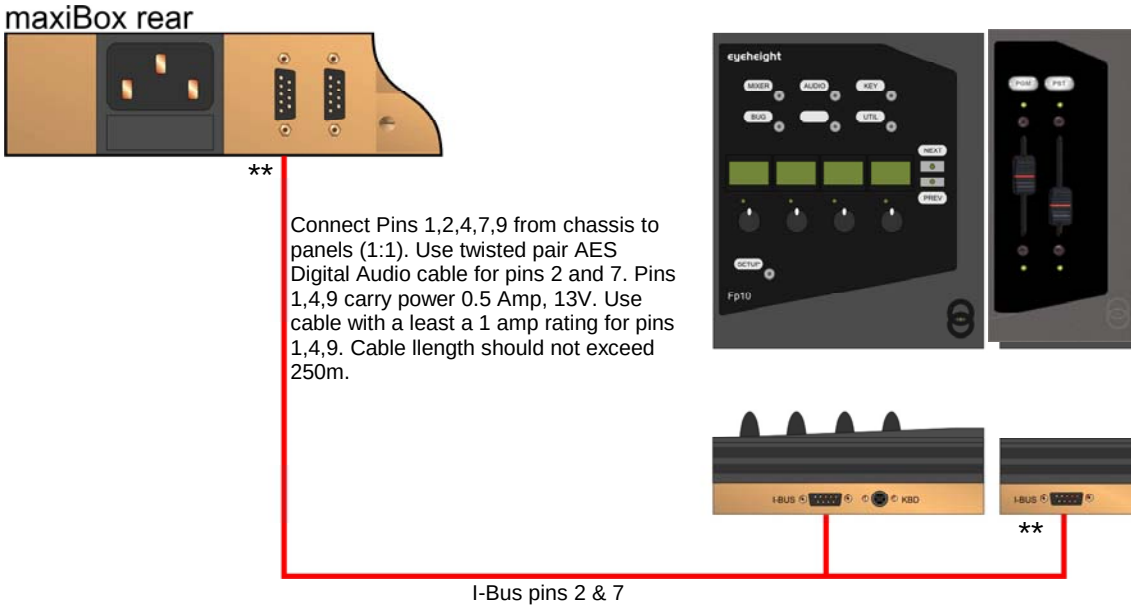
2.4 Connecting Panels to the AM-2E

The AM-2E may be operated using a FP-9 Flexipanel locally mounted. For a more operational environment the AM-2E may be supplied with a desk mounting FP-10 unit and also possibly an AP-10 Desk mounting audio fader unit. For detailed information on connecting remote panels refer to the section “Connection of Remote Panels to a flexiBox” in the geNETics Hardware Installation Guide.

Below is shown a typical system consisting of an AM-2E in a flexiBox controlled by an FP-10 and an AP-10.


maxiBox rear
**
Connect Pins 1,2,4,7,9 from chassis to panels (1:1). Use twisted pair AES Digital Audio cable for pins 2 and 7. Pins 1,4,9 carry power 0.5 Amp, 13V. Use cable with a least a 1 amp rating for pins 1,4,9. Cable llength should not exceed 250m.
eyeheight
I-BUS
KBD
I-BUS
**
I-Bus pins 2 & 7

** The I-BUS Network requires terminating with 100 Ohms at each extreme end of the network. Ensure that this is done either by an external 100 ohm resistor OR ONE Panel/Product at each end has the termination set. See the "Genetics User Guide" Under the sections "Flexipanel Power/I-BUS Jumpers".For the 4RU Panels see “4RU Panel (FP-10) Jumpers for I-BUS” and “4RU Panel (VP-10, SW-10, AP-10) Jumpers for I-BUS” . Alternatively The termination can be set on a Product (ie the MW-2 module). Information about this is given in this manual.

Figure 2-8 I-Bus Connections and Termination

N.B. From 1/10/02 Eyeheight introduced a change in the flexiBox Chassis. Most versions now have two 9 way connectors on the rear labelled “I-Bus” and “D-Bus”. The “I-Bus” connector is the same as the previously labelled “Can-B” connector. Although a maxiBox is shown in this diagram the same arrangement applies for a flexiBox chassis.

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3 Operation

3.1 Manual control of the AM-2E

Manual Control of the AM-2E is done using one or more of the following control surfaces:

- The 1RU FP-9 flexiPanel.
- The FP10 Desk mounting panel
- The AP-10 Desk mounting audio fader module
- The FP-9 and the FP-10 have identical manual control systems. (The FP-10 is simply a desktop version of the FP-9). The AP-10 brings further functionality to the unit in the manual fader transitions.

The AM-2E is, as are all genetics modules, controlled using a set of MENUS. Each of these menus contains up to 3 parameters that are adjusted using the rotary digipots. The Menus define all of the adjustable operational parameters in the AM-2E. Pressing the rotary digipots brings the parameter to its default value. Device selection is done using the device select switches which, when pressed, will offer the name of the device in the LCD Window. Modules can be acquired and then de-acquired using the set-up switch. For a full description of the operation philosophy of the geNETics system refer to the “geNETics User Guide” (section “Operation of the flexiPanel”)

A full list of the Menus and their functions are given in section 3 of this chapter.

3.2 Automation Control of the AM-2E

Automation of the geNETics products is achieved via an RS422 port.** This port is marked RS422 on the rear of a flexiBox. For the port to work a flexiPanel MUST be connected locally on the front of the flexiBox.

Automation control of the AM-2E can be done using two protocol methods:

- geNETics Automation Protocol.
- PresTX Automation Protocol.

Genetics protocol is described in detail in the “GeNETics User Guide” section titled “Automation Protocol on the geNETics Platform”. The menu list in section 3 of this chapter contains the data information for the protocol.

PresTX Automation Protocol is used only for the PresTX Presentation Mixer and channel branding system. In this case an AU-2 Automation card is also required. Refer to the PresTX Product manual

**On most flexiBoxes later than 1/10/02 the RS422 port has been replaced by a “D-Bus” Port. The D-Bus port is for High Speed data transfer and is not used for serial control. In order to achieve serial control of any products on an I-Bus network Eyeheight Ltd have developed a RS232→I-bus converter “dongle”, (DG-9) which enables greater flexibility of products on the I-Bus network whilst using

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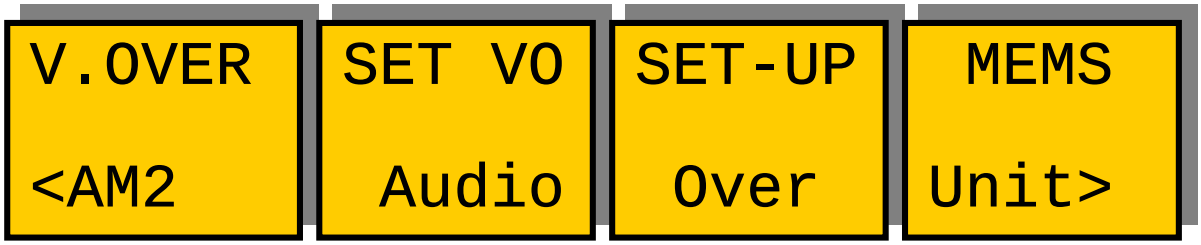
the same protocols as the RS422 port. Please refer to the “User guide for the DG-9 eyeheight dongle and set-up software.

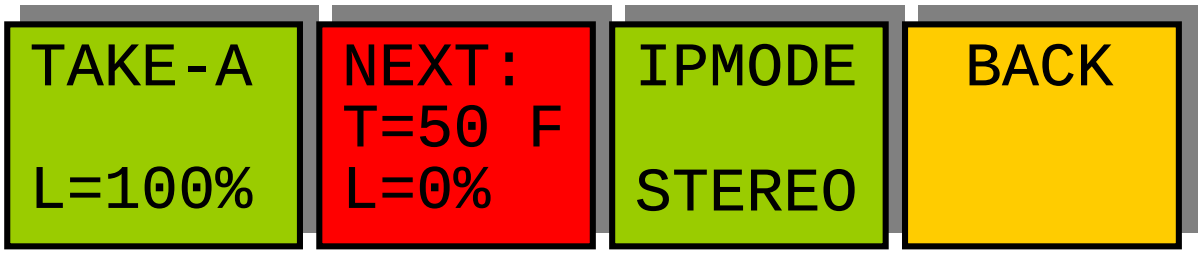
3.3 Operational Menus for the AM-2E

Menus 00-03 Top Level Menus



Menu Num.	Heading	Automation	Function
00	V.OVER	none	Go To the voice over activation menus (52→)
01	SET VO	none	Go To the voice-over level and transition times menus (76→)
02	SET-UP	none	Go to the user set-up menus. (80→
03	MEMS	none	Go To the main Memory menus (24→)

Menus 04-07 Audio A menus (VO1). (Hidden, automation use only)



Menu Num.	Heading	Automation	Function
04	TAKE-A (AES Inp.#1)	1=take	This Causes the Auto Transition to occur from the current level to the “NEXT” level.
05	NEXT:	Menu level “A” 1-200 Frames Menu level “B” 0-1023	Press this button and two digipots indicated by the lit LED’s will change the Next Transition time and the Next Audio Level.
06	IPMODE	0=Stereo 1=L<>R 2=L→LR 3=R→LR 4=Mono	This will cause modification to the “A” Channel (AES input 1) audio as follows: • Stereo (No change)

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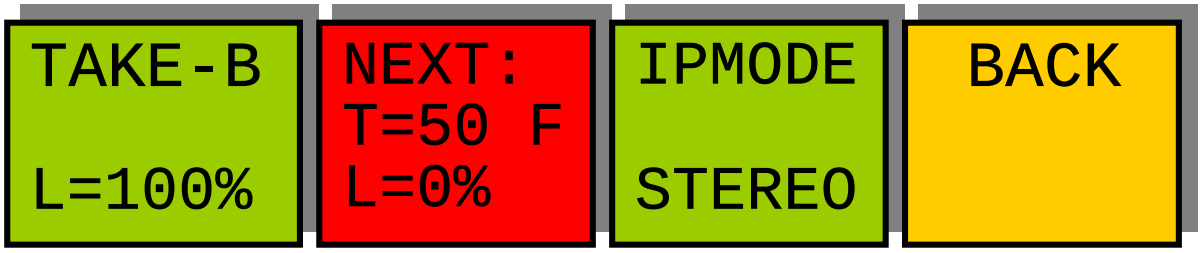
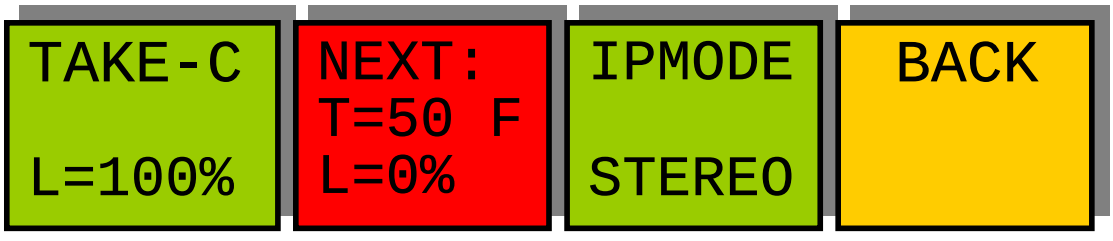
			• Left and Right Swapped • Left to both Left and Right • Right to both Left and Right • Mono
07	BACK	none	Go To the Top Level Menus

Menus 08-11 Audio B menus (VO2). (Hidden, automation use only)



Menu Num.	Heading	Automation	Function
08	TAKE-B (AES Inp.#2)	1=take	This Causes the Auto Transition to occur from the current level to the "NEXT" level.
09	NEXT:	Menu level "A" 1-200 Frames Menu level "B" 0-1023	Press this button and two digipots indicated by the lit LED's will change the Next Transition time and the Next Audio Level.
10	IPMODE	0=Stereo 1=L<>R 2=L→LR 3=R→LR 4=Mono	This will cause modification to the "B" Channel (AES input 2) audio as follows: • Stereo (No change) • Left and Right Swapped • Left to both Left and Right • Right to both Left and Right • Mono
11	BACK	none	Go To the Top Level Menus

Menus 12-15 Audio C menus (Pgm 12). (Hidden, automation use only)



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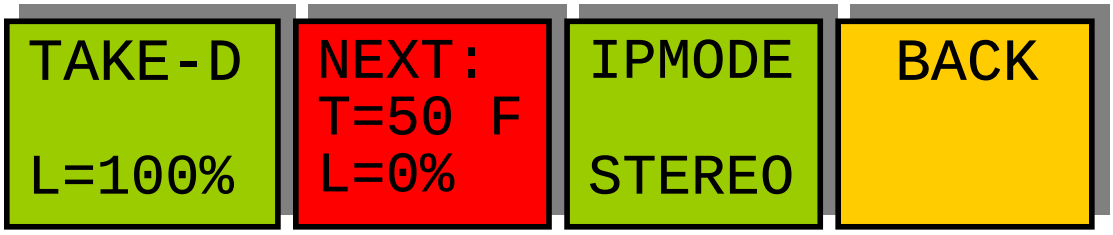
Menu Num.	Heading	Automation	Function
12	TAKE-C (Embedded Input A12)	1=take	This Causes the Auto Transition to occur from the current level to the “NEXT” level.
13	NEXT:	Menu level “A” 1-200 Frames Menu level “B” 0-1023	Press this button and two digipots indicated by the lit LED’s will change the Next Transition time and the Next Audio Level.
14	IPMODE	0=Stereo 1=L<>R 2=L→LR 3=R→LR 4=Mono	This will cause modification to the “C” Channel (Embedded Audio 12) audio as follows: • Stereo (No change) • Left and Right Swapped • Left to both Left and Right • Right to both Left and Right • Mono
15	BACK	none	Go To the Top Level Menus

Menus 16-19 Audio D menus (Pgm 34). (Hidden, automation use only)



Menu Num.	Heading	Automation	Function
16	TAKE-D (Embedded Input A34)	1=take	This Causes the Auto Transition to occur from the current level to the “NEXT” level.
17	NEXT:	Menu level “A” 1-200 Frames Menu level “B” 0-1023	Press this button and two digipots indicated by the lit LED’s will change the Next Transition time and the Next Audio Level.
18	IPMODE	0=Stereo 1=L<>R 2=L→LR 3=R→LR 4=Mono	This will cause modification to the “C” Channel (Embedded Audio 34) audio as follows: • Stereo (No change) • Left and Right Swapped • Left to both Left and Right • Right to both Left and Right • Mono
19	BACK	none	Go To the Top Level Menus

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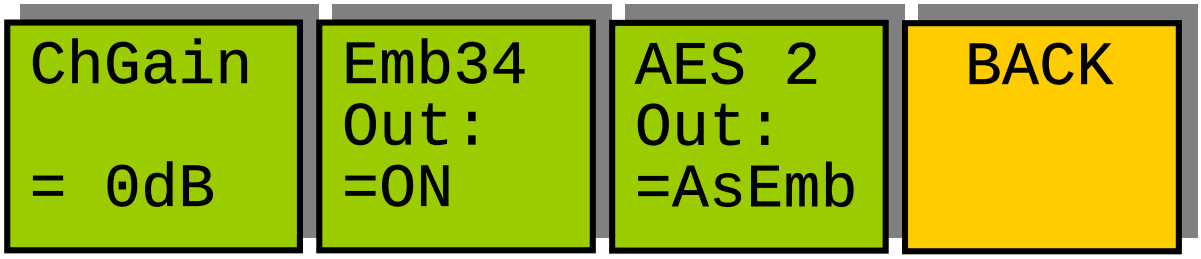
Menus 20-23 Miscellaneous audio functions. (Hidden, automation use only)



Menu Num.	Heading	Automation	Function
20	ChGain	0=-12dB 1=-6dB 2=0dB 3=+6dB 4=+12dB 5=+18dB	This sets the overall gain on the Embedded Audio.This applies only for the MW-3E Module, which incorporates embedded audio mixing.
21	Emb 34 Output	0=Off 1=On 2=Fol12 3=PFL 3=PFL+ 3=CF+	• This changes the Function of the Emb A34 Output. • "Off" will set the Emb34 Output audio level to zero. TAKE-C and TAKE-D will have no effect on Emb A34. This is achieved by setting the Current Level and the Next Level to Zero. The user can over-ride this using the TAKE-D menu set. • "On" will set the Emb34 Output audio level to Unity. TAKE-C and TAKE-D will have no effect on Emb A34. This is achieved by setting the Current Level and the Next Level to Unity. The user can over-ride this using the TAKE-D menu set. • "Fol12" will cause TAKE-C to take both Emb A12 and Emb A34 simultaneously to the level pre-set in the TAKE-C menu set. A Fader (AP-10/10M) module on channel C will also cause both Emb12 and Emb34 inputs to fade simultaneously. • "PFL" (Pre-Fader Listen) makes Emb A34 output act as a preview of the AES 1 and AES 2 input channels. Activation is achieved using the PFL Menu set. • "PFL+" (Pre-Fader Listen) makes Emb A34 output act as a preview of the AES 1 and AES 2 input channels. • This also mixes in the incoming Emb A34 which may contain the PFL from cascaded AM-2E units. Activation is achieved using the PFL Menu set. • "CF (Clean Feed) Feeds the Emb12 input to the Emb A34 Output The user can then use the PFL activation menus to create a clean feed of

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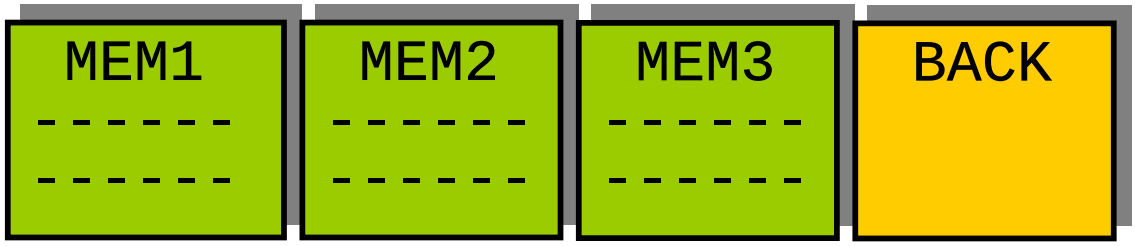
			Emb12 (PGM) with any wanted AES Inputs onto Emb34.
22	AES 2 Output	0=As Emb 1=PFL 2=PFL+ 3=CF+	• This changes the Function of the AES 2 Output. • "As Emb" This means that the AES 2 Output will now follow the Emb A34 Output and is therefore set up by Menu#21 (Above) • "PFL" (Pre-Fader Listen) makes the AES 2 Output act as a preview of the AES 1 and AES 2 Input channels. Activation is achieved using the PFL Menu set. • "PFL+" (Pre-Fader Listen+) makes the AES 2 Output act as a preview of the AES 1 and AES 2 Input channels. This also mixes in the incoming Emb A34 which may contain the PFL from cascaded AM-2E units. Activation is achieved using the PFL Menu set. • "CF (Clean Feed) Feeds the Emb12 input to the AES 2 Output The user can then use the PFL activation menus to create a clean feed of Emb12 (PGM) with any wanted AES Inputs onto AES 2.
23	BACK	none	Go To the Top Level Menus

Menus 24-27 Memory 1→3 menus (NEXT to navigate)



Menu Num.	Heading	Automation	Function
24	MEM1	1=Recall	Pressing this will recall Memory number 1.User Names can be programmed in to the memories using a keyboard. See "geNETics User guide", section "Giving product Memories names"
25	MEM2	1=Recall	Pressing this will recall Memory number 2.
26	MEM3	1=Recall	Pressing this will recall Memory number 3.
27	BACK	none	Go To the Top Level Menus

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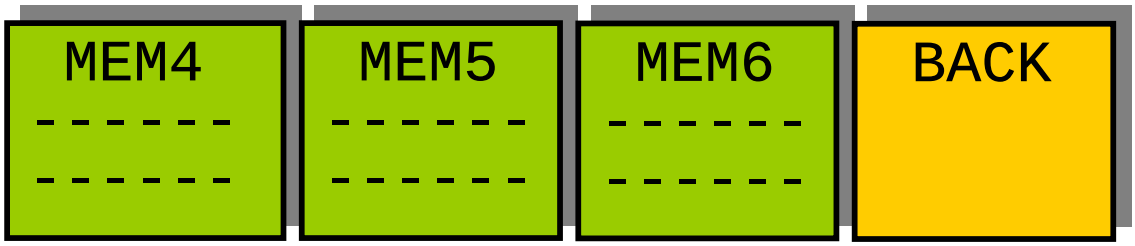
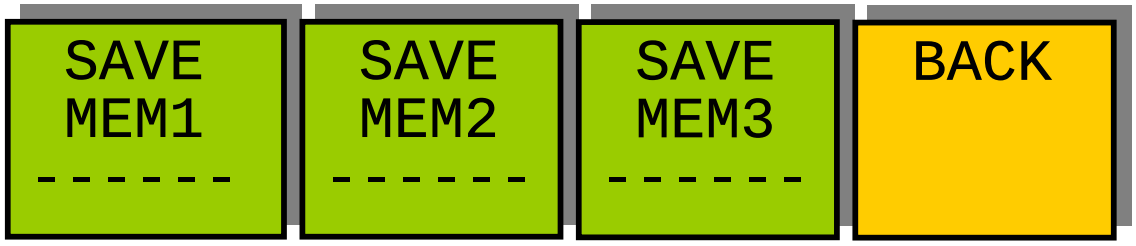
Menus 28-31 Memory 4→6 menus (NEXT/PREV to navigate)



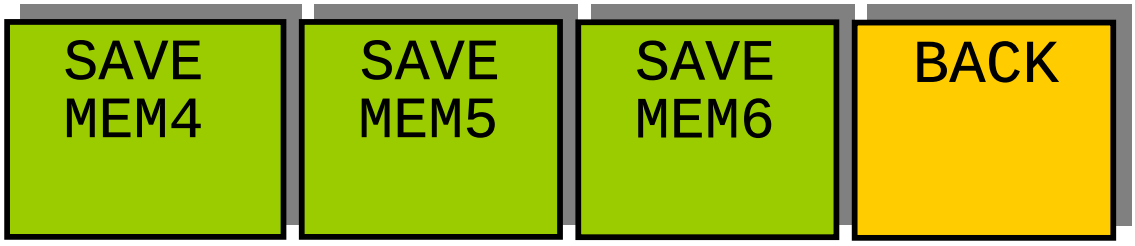
Menu Num.	Heading	Automation	Function
28	MEM4	1=Recall	Pressing this will recall Memory number 4.
29	MEM5	1=Recall	Pressing this will recall Memory number 5.
30	MEM6	1=Recall	Pressing this will recall Memory number 6.
31	BACK	none	Go To the Top Level Menus

Menus 32-35 Save memory 1→3 menus (NEXT/PREV to navigate)



Menu Num.	Heading	Automation	Function
32	SAVE MEM1	1=Save	Pressing this will Save Memory number 1.
33	SAVE MEM2	1= Save	Pressing this will Save Memory number 2.
34	SAVE MEM3	1= Save	Pressing this will Save Memory number 3.
35	BACK	none	Go To the Top Level Menus

Menus 36-39 Save memory 4→6 menus (NEXT/PREV to navigate)



Menu Num.	Heading	Automation	Function
36	SAVE	1= Save	Pressing this will Save Memory

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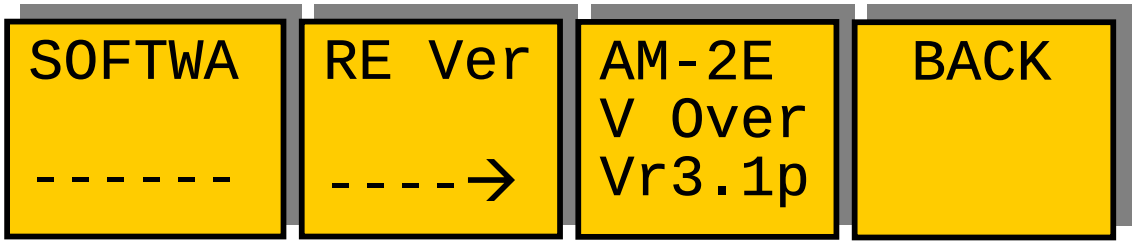
	MEM4		number 4.
37	SAVE MEM5	1= Save	Pressing this will Save Memory number 5.
38	SAVE MEM6	1= Save	Pressing this will Save Memory number 6.
39	BACK	none	Go To the Top Level Menus

Menus 40-43 Power on memory menus. (NEXT/PREV to navigate)

Menu Num.	Heading	Automation	Function
40	Set As Pow On Memory	1=Set	Pressing this will set the current system set-up as the Power on memory default.
41	Recall Pow On Memory	1=Recall	Pressing this will recall The Power-on memory set up in the last menu.
42	Total Reset	1=Reset	Pressing this will cause a first Birthday of the unit. All current memories and settings will be lost.
43	BACK	none	Go To the Top Level Menus

Menus 44-47 Software version menu (PREV to navigate)



Menu Num.	Heading	Automation	Function
44	Info	none	Information
45	Info	none	Information
46	none	none	Software Version Information
47	BACK	none	Go To the Top Level Menus

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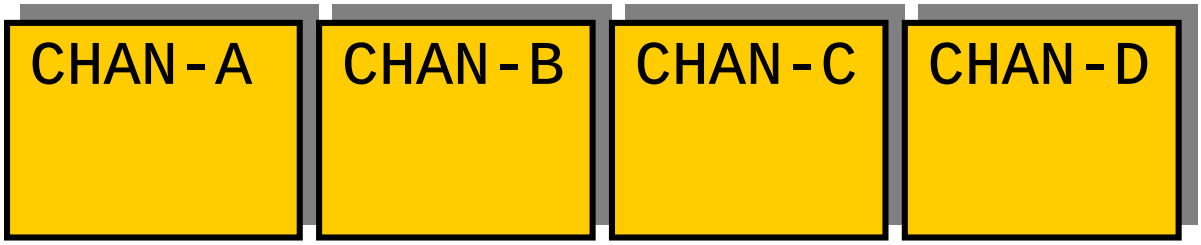
Menus 48-51 Channel nest menus



Menu Num.	Heading	Automation	Function
48	CHAN-A	none	Go to Chan A Play menus (4-7)
49	CHAN-B	none	Go to Chan A Play menus (8-11)
50	CHAN-C	none	Go to Chan A Play menus (12-15)
51	CHAN-D	none	Go to Chan A Play menus (16-19)

Menus 52-55 Voice over activation menus

Menu Num.	Heading	Automation	Function
52	VO 1	0=VO1 Off 1=VO1 On	Activates Voice Over Input Number 1. This is the AES 1 Input. This can be named by the user. See
53	VO 2	0=VO2 Off 1=VO2 On	Activates Voice Over Input Number 2. This is the AES 2 Input. This can be named by the user. See
54		none	
55	BACK	none	Go To the Top Level Menus

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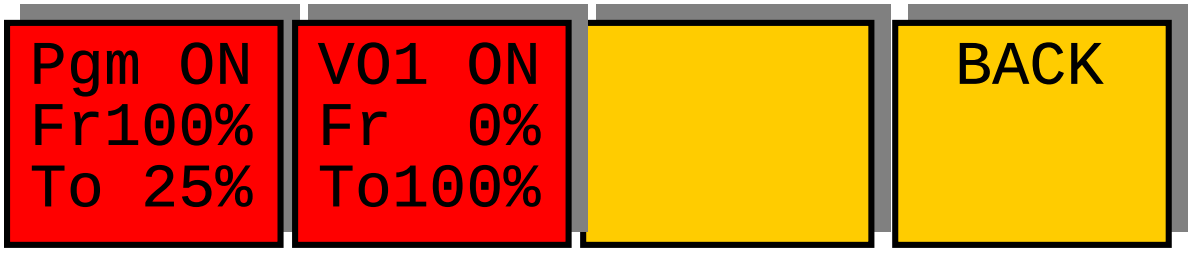
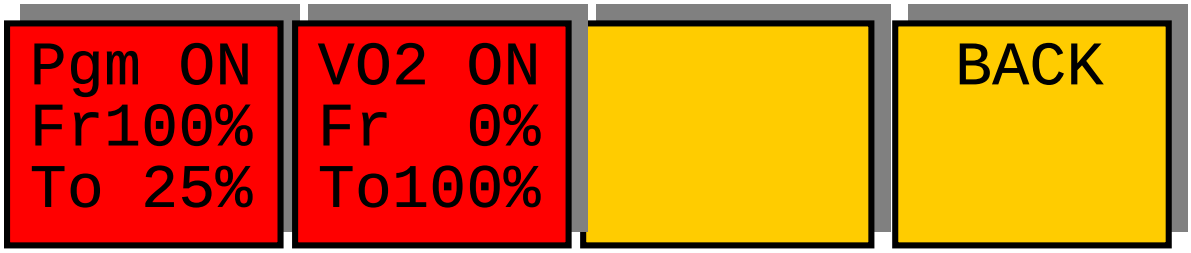
Menus 56-59 Voice over 1 activation menus



Menu Num.	Heading	Automation	Function
56	Pgm From To	Menu level "A" 0=Off, 1=On Menu level "B" 0→1023 Menu level "C" 0→1023	Press this button and <u>two</u> digipots indicated by the lit LED's will control: Activation of the PGM Level If the above is "ON" the Programme volume will go **<u>from</u>** this level **<u>to</u>**……. ….. this level
57	VO1 From To	Menu level "A" 0=Off, 1=On Menu level "B" 0→1023 Menu level "C" 0→1023	Press this button and <u>two</u> digipots indicated by the lit LED's will control: Activation of the Voice over channel 1 Level. If the above is "ON" the Voice over volume will go **<u>from</u>** this level **<u>to</u>**……. ….. this level
58		none	
59	BACK	none	Go To the Top Level Menus

Menus 60-63 Voice over 2 activation menus



Menu Num.	Heading	Automation	Function
60	Pgm From To	Menu level "A" 0=Off, 1=On Menu level "B" 0→1023 Menu level "C" 0→1023	Press this button and <u>two</u> digipots indicated by the lit LED's will control: Activation of the PGM Level If the above is "ON" the Programme volume will go **<u>from</u>** this level **<u>to</u>**……. ….. this level

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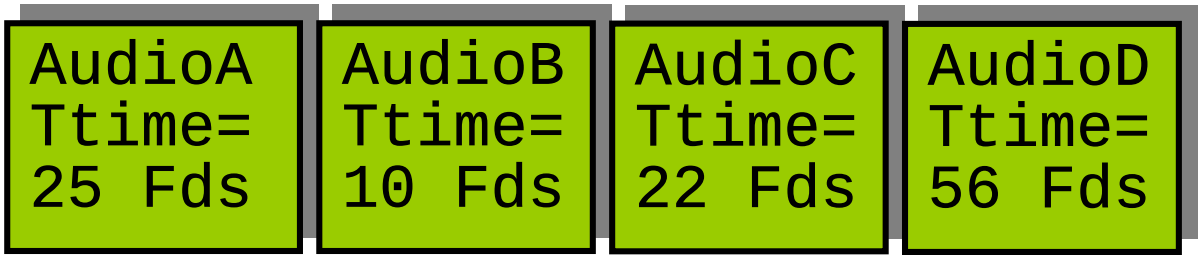
61	VO2 From To	Menu level “A” 0=Off, 1=On Menu level “B” 0→1023 Menu level “C” 0→1023	Press this button and <u>two</u> digipots indicated by the lit LED’s will control: Activation of the Voice over channel 1 Level. If the above is “ON” the Voice over volume will go **<u>from</u>** this level **<u>to</u>**……. ….. this level
62		none	
63	BACK	none	Go To the Top Level Menus

Menus 64-67 Audio transition time menus. (Hidden, automation only)



Menu Num.	Heading	Automation	Function
64	Audio A Transition Time	1→250 Fields	This adjusts The Transition Time from the current Level to the new preset level (set in menu#5) of the input AES1.
65	Audio B Transition Time	1→250 Fields	This adjusts The Transition Time from the current Level to the new preset level (set in menu#9) of the input AES2.
66	Audio C Transition Time	1→250 Fields	This adjusts The Transition Time from the current Level to the new preset level (set in menu#13) of the input Embedded Audio 12.
67	Audio D Transition Time	1→250 Fields	This adjusts The Transition Time from the current Level to the new preset level (set in menu#17) of the input Embedded Audio 34.

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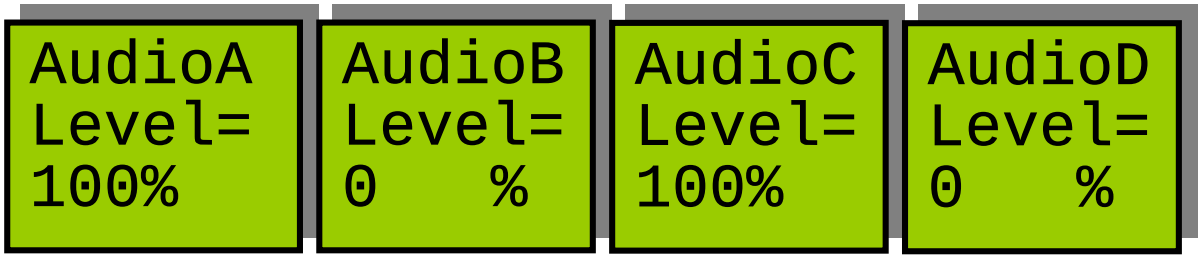
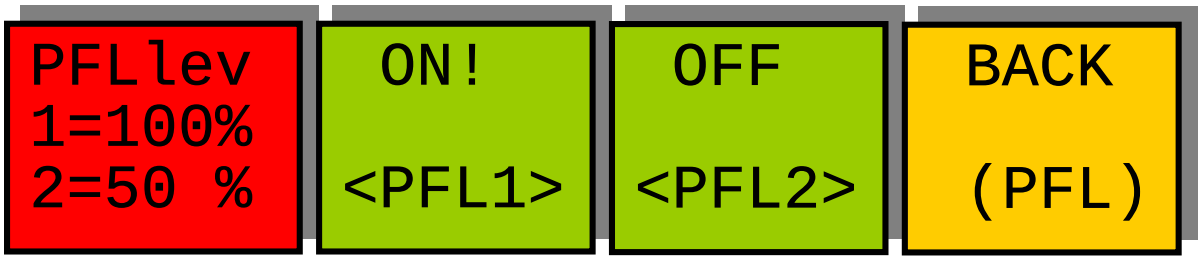
Menus 68-71 Audio transition level menus. (Hidden, automation only)



Menu Num.	Heading	Automation	Function
68	Audio A Level	0→1023 (0→100%)	This adjusts The level of the AES 1 Input.
69	Audio B Level	0→1023 (0→100%)	This adjusts The level of the AES2 Input.
70	Audio C Level	0→1023 (0→100%)	This adjusts The level of the Embedded Audio 12 Input.
71	Audio D Level	0→1023 (0→100%)	This adjusts The level of the Embedded Audio 34 Input.

Menus 72-75 Audio transition level menus.



Menu Num.	Heading	Automation	Function
72	Pre Fader Listen Levels	Menu level "A" 0→1023 Menu level "B" 0→1023	Press this button and <u>two</u> digipots indicated by the lit LED's will control the AES1 and AES2 PFL volume levels.
73	PFL1 Activation	0=OFF 1=ON	Pressing this activates PFL 1 (AES 1)
74	PFL2 Activation	0=OFF 1=ON	Pressing this activates PFL 2 (AES 2)
75	BACK	none	Go To the PFL set-up menus (104→)

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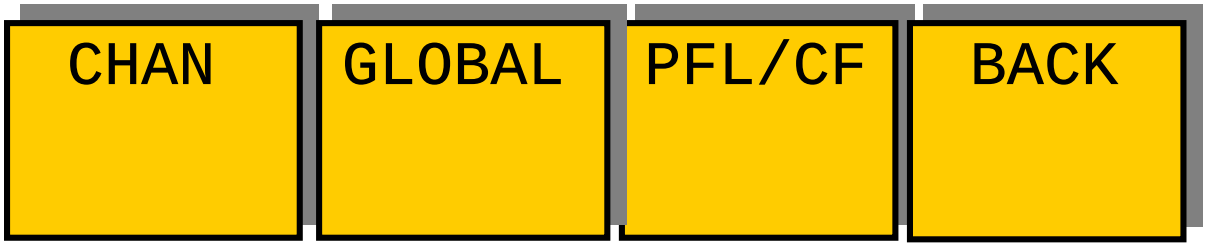
Menus 76-79 Voice over set-up menus.

Menu Num.	Heading	Automation	Function
76	Set-up VO 1	none	This will take you to the Voice over 1 set-up menus. (56→)
77	Set-up VO 2	none	This will take you to the Voice over 1 set-up menus. (60→)
78		none	
79	BACK	none	Go To the Top Level Menus

Menus 80-83 Miscellaneous set-up menus.



Menu Num.	Heading	Automation	Function
80	Channel set-up	none	This will take you to the Channel set-up menus for VO1, VO2 and Pgm. (84→)
81	Global set-up	none	This will take you to the global set-up menus. (100→)
82	Pre fader listen/clean feed	none	This will take you to the PFL/CF set-up menus
83	BACK	none	Go To the Top Level Menus

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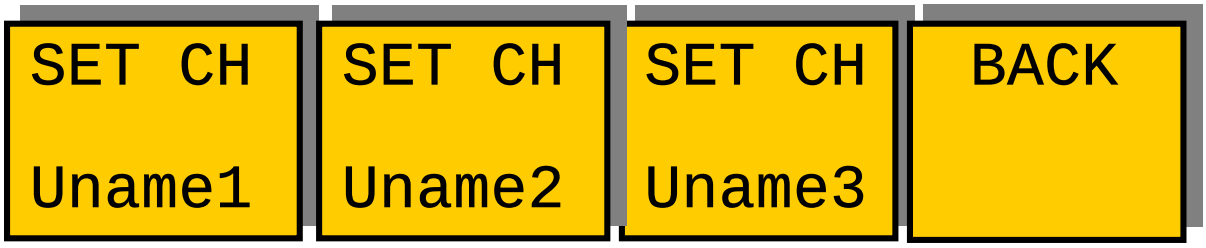
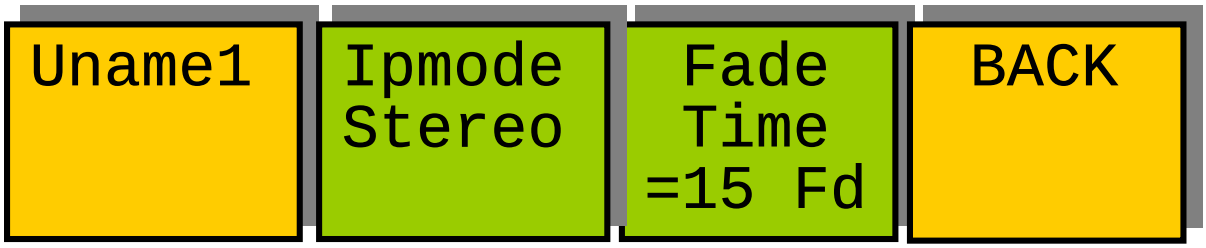
Menus 84-87 Channel set-up menus.



Menu Num.	Heading	Automation	Function
84	Uname 1 set-up (usually VO1)	none	This will take you to the channel set up for the AES 1 input channel with user name Uname1. This is usually voice over 1 (88→).
85	Uname 1 set-up (usually VO2)	none	This will take you to the channel set up for the AES 2 input channel with user name Uname2. This is usually voice over 2 (92→).
86	Uname 1 set-up (usually PGM)	none	This will take you to the channel set up for the Embedded 1/2 input channel with user name Uname3. This is usually the PGM channel (96→).
87	BACK	none	Go To the menus 80→.

Menus 88-91 AES input 1, (VO1) set up.



Menu Num.	Heading	Automation	Function
88	Channel name info (usually VO1)	none	Displays the current username of this channel.
89	Input mode	0=Stereo 1=L<>R 2=L→LR 3=R→LR 4=Mono	This will cause modification to this channel (AES 1, VO-1) audio as follows:

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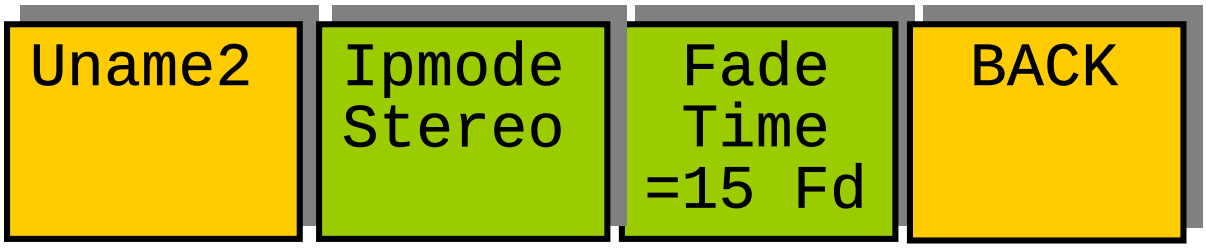
			• Stereo (No change) • Left and Right Swapped • Left to both Left and Right • Right to both Left and Right • Mono
90	Audio level adjust.	none	This adjusts The level of the AES 1 Input. This is not normally an operational control but is useful for diagnostics.
91	BACK	none	Go To menu 84→

Menus 92-95 AES input 2, (VO2) set up.



Menu Num.	Heading	Automation	Function
92	Channel name info (usually VO2)	none	Displays the current username of this channel.
93	Input mode	0=Stereo 1=L<>R 2=L→LR 3=R→LR 4=Mono	This will cause modification to this channel (AES 2, VO-2) audio as follows: • Stereo (No change) • Left and Right Swapped • Left to both Left and Right • Right to both Left and Right • Mono
94	Audio level adjust.	none	This adjusts The level of the AES 2 Input. This is not normally an operational control but is useful for diagnostics.
95	BACK	none	Go To menu 84→

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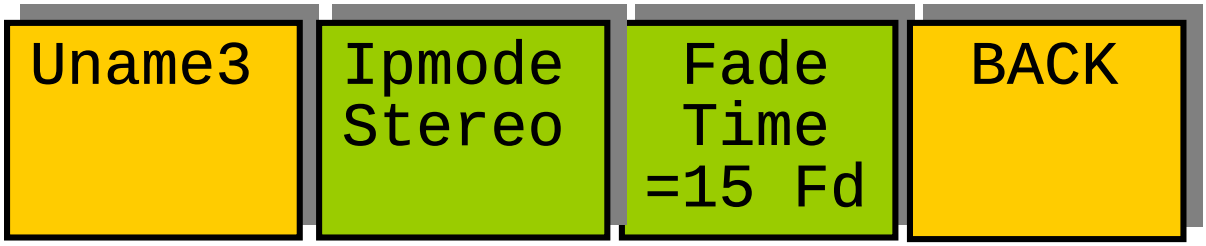
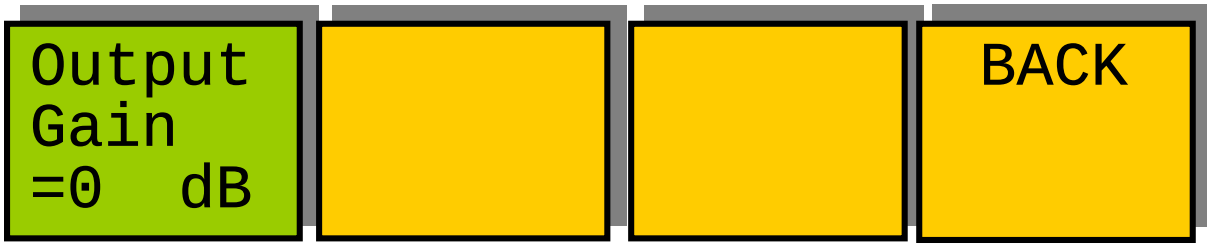
Menus 96-99 AES input 2, (VO2) set up.



Menu Num.	Heading	Automation	Function
96	Channel name info (usually Pgm)	none	Displays the current username of this channel.
97	Input mode	0=Stereo 1=L<>R 2=L→LR 3=R→LR 4=Mono	This will cause modification to this channel (Embedded 1/2, Pgm) audio as follows: • Stereo (No change) • Left and Right Swapped • Left to both Left and Right • Right to both Left and Right • Mono
98	Audio level adjust.	none	This adjusts The level of the embedded 2 Input. This is not normally an operational control but is useful for diagnostics.
99	BACK	none	Go To menu 84→

Menus 100-103 Global gain.



Menu Num.	Heading	Automation	Function
100	Output gain	0=-12dB 1=-6dB 2=0dB 3=+6dB 4=+12dB 5=+18dB	This sets the overall gain on the output of the unit.
101		none	

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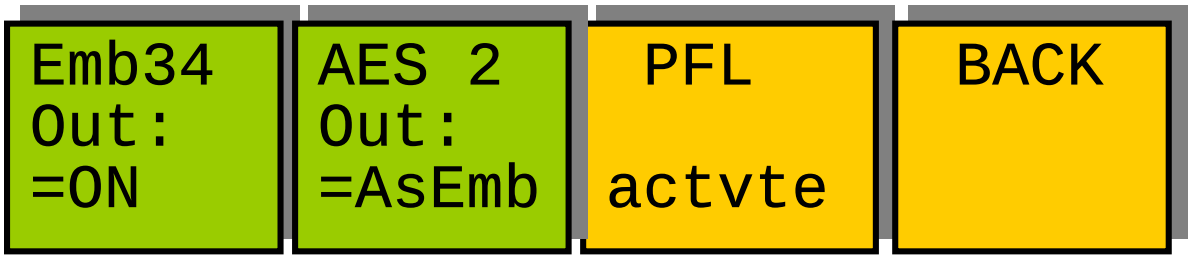
102		none	
103	BACK	none	Go To menu 84→

Menus 104-107 Embedded 34 and AES 2 output control.



Menu Num.	Heading	Automation	Function
104	Emb 34 Output	0=Off 1=On 2=Fol12 3=PFL 3=PFL+ 3=CF+	• This changes the Function of the Emb A34 Output. • "Off" will set the Emb34 Output audio level to zero. TAKE-C and TAKE-D will have no effect on Emb A34. This is achieved by setting the Current Level and the Next Level to Zero. The user can over-ride this using the TAKE-D menu set. • "On" will set the Emb34 Output audio level to Unity. TAKE-C and TAKE-D will have no effect on Emb A34. This is achieved by setting the Current Level and the Next Level to Unity. The user can over-ride this using the TAKE-D menu set. • "Fol12" will cause TAKE-C to take both Emb A12 and Emb A34 simultaneously to the level pre-set in the TAKE-C menu set. A Fader (AP-10/10M) module on channel C will also cause both Emb12 and Emb34 inputs to fade simultaneously. • "PFL" (Pre-Fader Listen) makes Emb A34 output act as a preview of the AES 1 and AES 2 input channels. Activation is achieved using the PFL Menu set. • "PFL+" (Pre-Fader Listen) makes Emb A34 output act as a preview of the AES 1 and AES 2 input channels. • This also mixes in the incoming Emb A34 which may contain the PFL from cascaded AM-2E units. Activation is achieved using the PFL Menu set. • "CF (Clean Feed) Feeds the Emb12 input to the Emb A34 Output The user can then use the PFL activation menus to create a clean feed of

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			Emb12 (PGM) with any wanted AES Inputs onto Emb34.
105	AES 2 Output	0=As Emb 1=PFL 2=PFL+ 3=CF+	• This changes the Function of the AES 2 Output. • "As Emb" This means that the AES 2 Output will now follow the Emb A34 Output and is therefore set up by Menu#21 (Above) • "PFL" (Pre-Fader Listen) makes the AES 2 Output act as a preview of the AES 1 and AES 2 Input channels. Activation is achieved using the PFL Menu set. • "PFL+" (Pre-Fader Listen+) makes the AES 2 Output act as a preview of the AES 1 and AES 2 Input channels. This also mixes in the incoming Emb A34 which may contain the PFL from cascaded AM-2E units. Activation is achieved using the PFL Menu set. • "CF (Clean Feed) Feeds the Emb12 input to the AES 2 Output The user can then use the PFL activation menus to create a clean feed of Emb12 (PGM) with any wanted AES Inputs onto AES 2.
106	Acivate the Pre-Fader Listen	none	This goes to the PFL activation menus (72→)
107	BACK	none	Go To menu 84→

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4 Technical Appendix

4.1 Technical Specification for the AM-2E

Number of Inputs	3
Type of Inputs	270Mbit Serial Digital Video Inputs 75 Ohm
Line Length	At least 200 Meters of PSF1/3 (Typically 275 Meters)
Number of Outputs	6 Output BNC's per Card (Configurable).
Type Of Outputs	270Mbit Serial Digital Video Outputs, 75 Ohm, 800mV
Total Number Of BNC Connections	10, consisting of 3 Fixed Inputs and 6 Jumper Configurable outputs. (One BNC not used)
SDI Output Jitter	The system will add less than 0.2UI to the input Jitter. (This is only guaranteed on issue 2 or later cards)
Current Consumption	<800mA at +5V
Size	215mm by 100mm

4.2 Jumpering the I-BUS (CAN-BUS) Termination

The I-BUS Network is the "control system" under which all Products and Panels are networked together. Under certain circumstances it is necessary to terminate the network. This can be done on a Panel or a "Product". To terminate this product, locate J6 on the AM-2E Processor Card supplied which is between U1 (The large square "chip") and the Edge connector. (This is on the half of the card labelled "CHP-100 Spartan2 Processor"). Jumper this with a 2mm link.

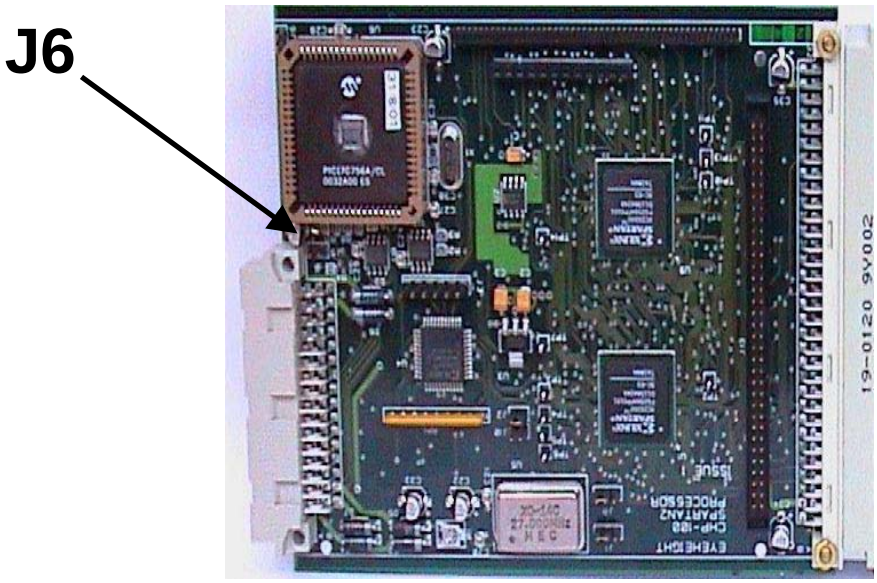

Figure 4-1 Location Of I-Bus Termination Link

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4.3 CHP-100 SDI-TC-GPI Card

4.3.1 Jumper Links on the Timecode and GPI I/O card

The AES output has a number of jumper links, which effect the formatting of the AES, output data.

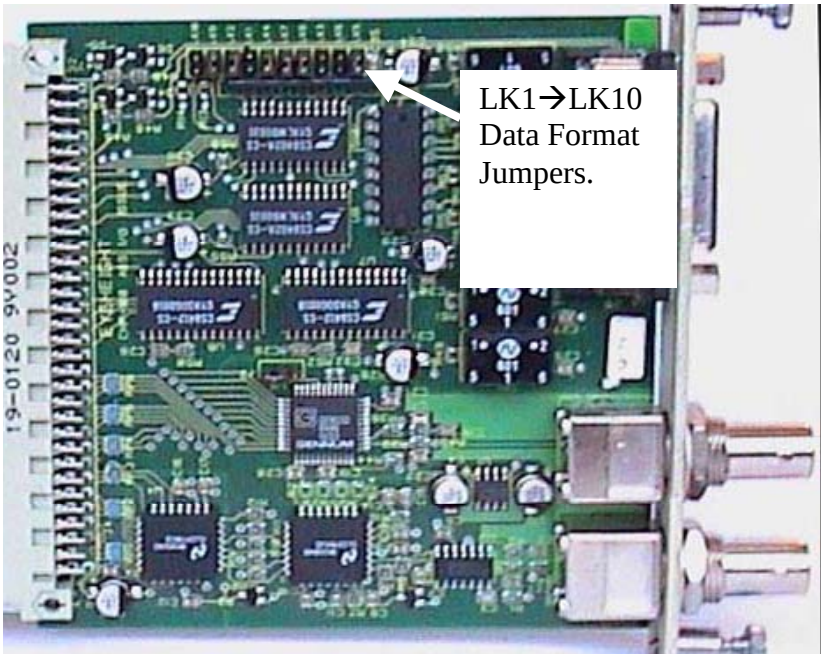

Figure 2 jumpers on the AM-2E I/O card

Link No.	Function of LK1→LK10 Links	Standard
10	Emphasis1, combined with Emphasis0 sets the Equalisation data on the channel status bits	No Link
9	Emphasis0, combined with Emphasis1 sets the Equalisation data on the channel status bits	Link
2	Stereo mode set in Channel Status bits. (Link to set)	Link
1	User Bit set in Channel Status bits. (Link to clear)	Link
4	Diagnostic MUST BE LINKED!!	Link
7	Validity Bit set in Channel Status bits. (Link to clear)	No Link
8	Sampling Freq1. combined with Sampling Freq0 sets the Sampling Frequency data on the channel status bits.	No Link
3	Non-Audio Bit set in Channel Status bits. (Link to set)	No Link
6	Professional Mode Bit set in Channel Status bits. (Link to set)	Link

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5	Sampling Freq0. combined with Sampling Freq1 sets the Sampling Frequency data on the channel status bits.	Link

Emphasis0	Emphasis1	Function
No Link	No Link	Undefined Emphasis
Link	No Link	No Emphasis
No Link	Link	50/15uS Emphasis
Link	Link	CCITT J17 Emphasis

Sampling Freq0	Sampling Freq1	Function
No Link	No Link	32.0K Sampling
Link	No Link	48.0K Sampling
No Link	Link	44.1K Sampling
Link	Link	Sampling Freq Not Indicated.

4.3.2 Rear 15W D-Type Pinout

Pin Number	Function
1	AES 1 Input+
2	AES 1 Input-
3	AES 2 Input+
4	AES 2 Input-
5	AES 1 Output A+
6	AES 1 Output A-
7	AES 2 Output A+
8	AES 2 Output A-
9	AES 1 Output B+
10	AES 1 Output B-
11	AES 2 Output B+
12	AES 2 Output B-
13	GPI1 VO1 Activate
14	GPI2 VO2 Activate
15	GND

GPI's are short to ground to activate.

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